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### **Scalable Cyber Deception**

DARPA Cyber Colloquium  
Arlington, VA

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## Deception in Warfare



<http://www.ng.mil/Images1/today/0501b.jpg>

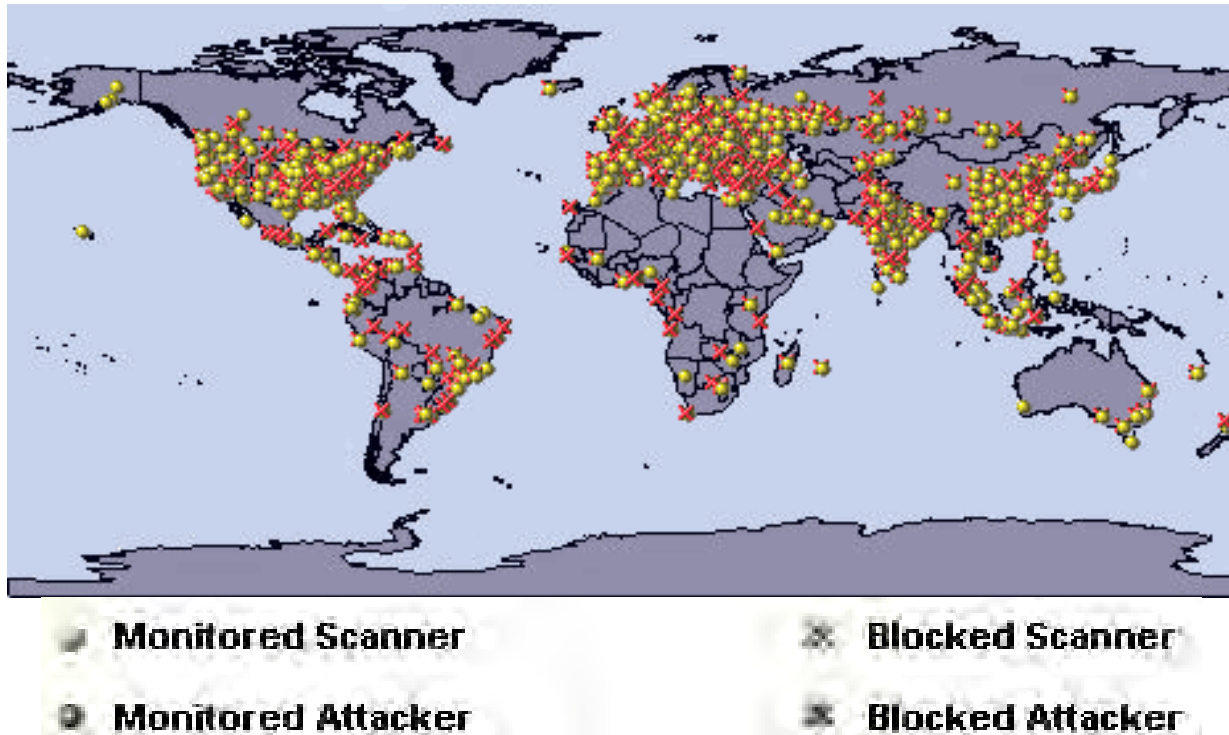
“All warfare is based on deception...” Sun Tzu

Deception: A direct counter to asymmetrical threats



## Intrusion attempts on a Government agency

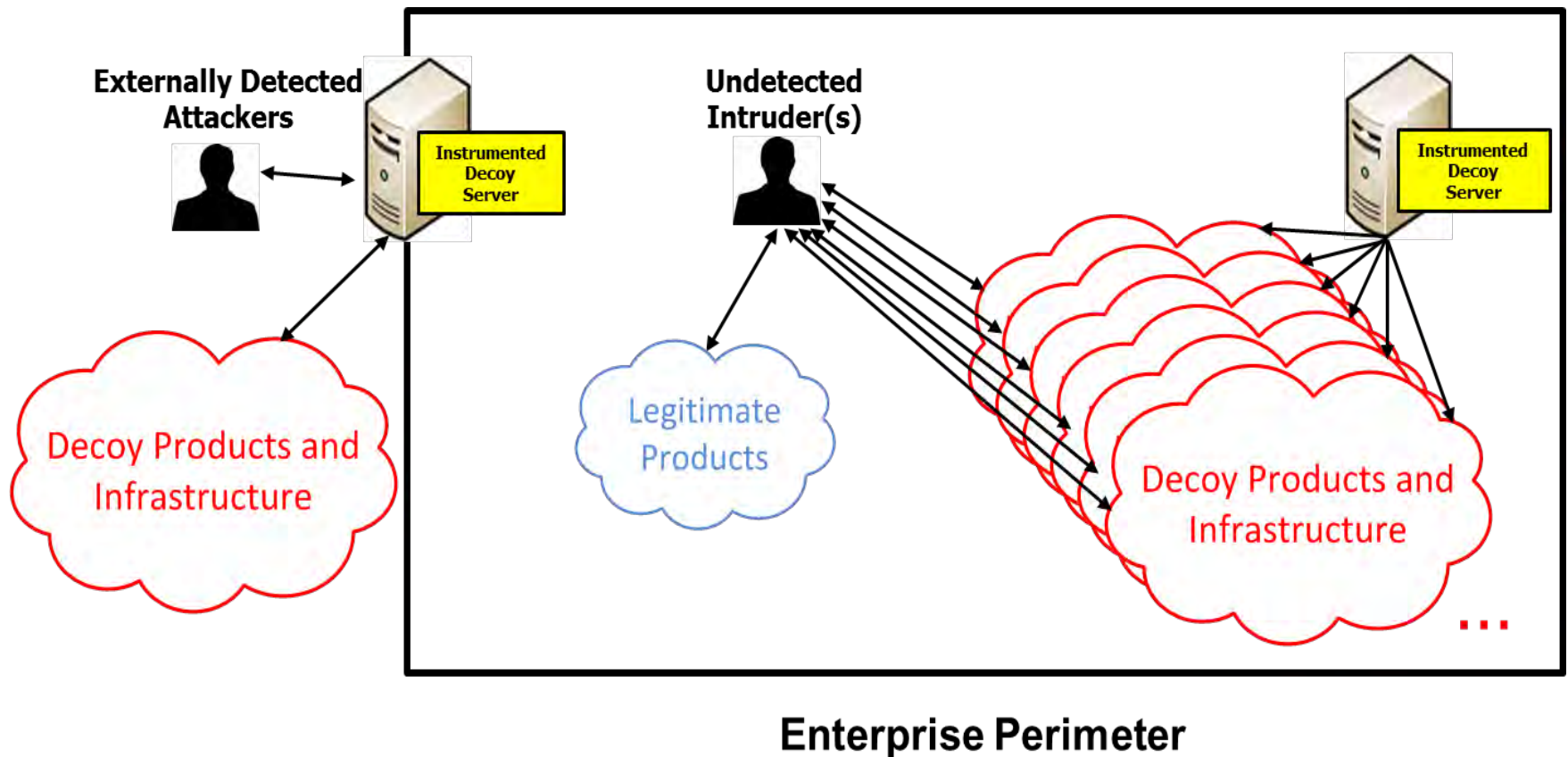
- 40,000 blocked intrusion attempts/week
- World-wide attack sources



An Opportunity?



# An Example Architecture for Cyber Deception





# Scalable Cyber Deception Issues

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## Generation and Deployment of both Decoy Products and Infrastructure

- Automated
- Realistic, Credible, Enticing
- Tailorable
- Differentiable / Non-differentiable
- Noninterference



## Key Technical Challenge

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To significantly increase adversaries' workloads  
with minimal increase to our own

### Promising Applicable Research Areas:

- Natural Language Processing
- Large-scale Virtualization
- Realistic Synthetic Activity Generation
- Protocol Manipulation and Exploitation
- Behavioral Science
- Others...



# Scalable and Tailorable Cyber Deception

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